

## Technical specification

Cherish your life, Cherish your health!

### Ventilation mode

IPPV, V-A/C , P-A/C , P-SIMV ,V-SIMV , PCV , PSV , SPONT/CPAP ,

PRVC(optional) ,APRV(optional) ,DuoI evel(optional) ,SIGH, MANU

### Ventilator parameter

Tidal volume (Vt)

0, 20 ~ 2000 ml

Frequency (Freq)

1 min~ 100min

Oxygen concentrat1on

21 % ~ 100%

I:E

4: 1 ~ 1: 8

PEEP

0 cm 比 0 ~ 40 cmH2O

Pressure limit

20 cm 比 0 ~ 100 cmH2O

### Alarm and protection

The AC power failure alarm Power failure or no connection

Internal backup battery low voltage alarm 11.3 ± 0.3 V

No tidal volume No tidal volume within 6 s

High minute volume alarm 5 L/min ~ 99 L/min

Low minute volume alarm 1 L/min ~ 30 L/min

Pressure triggering sensitivity (Ptr) -20 cm 比 0~ 0 cm 比 0 (Based on PEEP)

Suffocation warning 5 ~ 60 s

Flow triggering sensitivity (Fir) 0.5 cm 比 0 ~ 30 cmH 心

Fan error Show on screen

SIGH O(off) 1/100 ~ 5/100

Oxygen deficit Show on screen

Apnea ventilation

OFF, 5 s ~ 60 s

The maximum limited pressure < 12.5 kPa

### Monitoring parameter

Frequency (Freq)

0/min ~ 100/m1n

Tidal volume (Vt)

0 ml~ 2500 ml

MV

0 L/min ~ 99L/m1n

### Working condition

Gas source O<sub>2</sub> Air

Pressure 280 kPa - 600 kPa

Voltage 220 V ± 22 V

Airway pressure

0 cm 比 0 ~ 100 cmH 心

Dynamic lung compliance monitoring 1 mL/cmH<sub>2</sub>O ~ 1000 mL/cmH 心

Oxygen concentrat1on 15 % ~ 100 %

Power frequency 50 Hz ± 1 Hz

Input power 900 VA(With air compressor)

250 VA(Without air compressor)

### Packing size

Main engine: L 560 \* W 560 \* H 605 mm

G.W.: 35 KG, N.W.: 17 KG

Air compressor: L 683\* W 687 \* H 1140 mm

G.W.: 100 KG, N.W.: 65 KG

### Oscillogram

P-T(Pressure-Time)

F-T(Flow-Time)

P-V Loop(Pressure-Volume Loop)

# S1100 ICU Ventilator

Friendly Powerful Reliable



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# S1100 ICU Ventilator

## Application

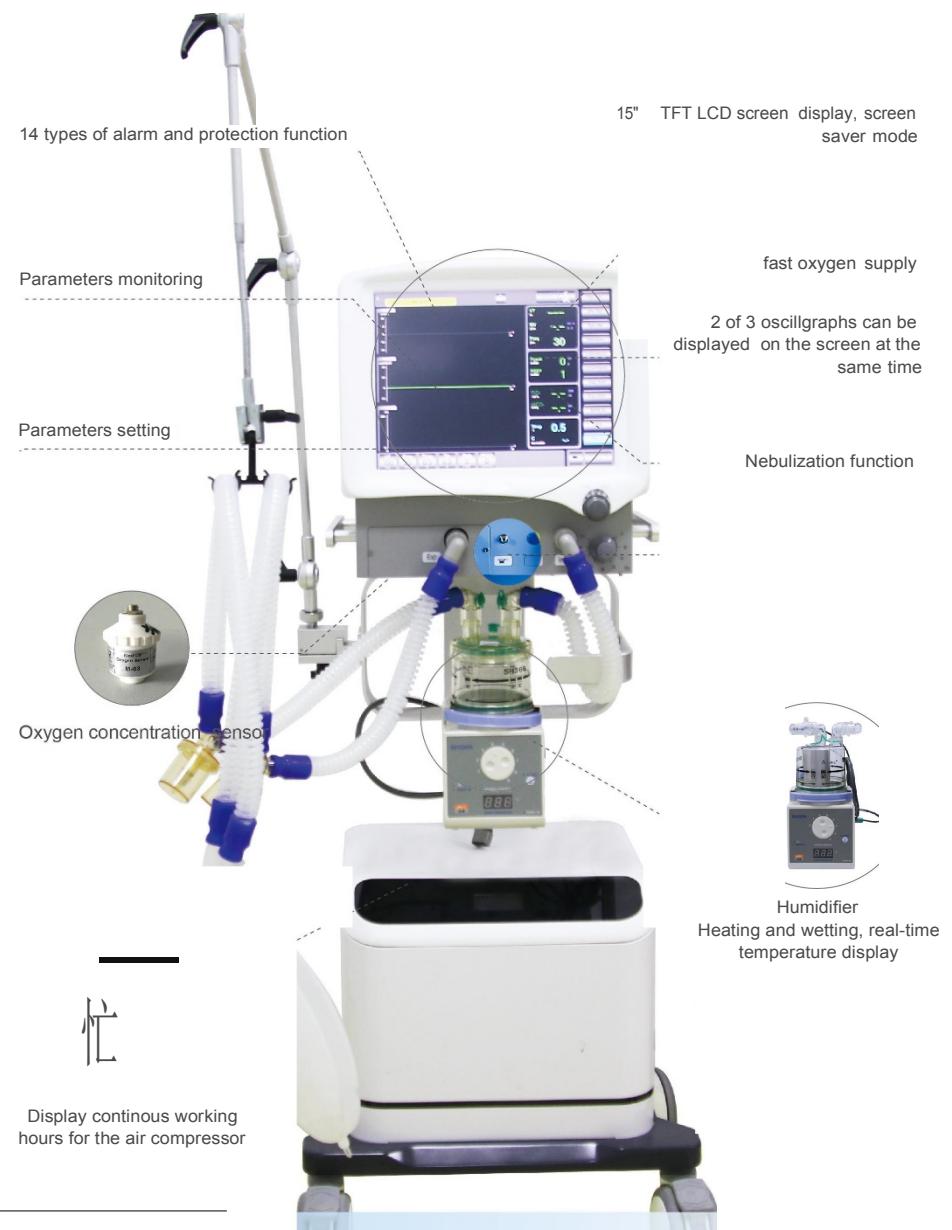
The ventilator makes a good performance in operation room, ICU department and emergency treatment. It used to assist or replace the spontaneous breathing for adult pediatric and neonatal more than 2kg. 25 years experience in Market-oriented ventilator make us professional and reliable, satisfying all your needs in ventilation. Due to the flexible configuration, good quality and competitive price, S1100 has soon become the superstar of market.

## Feature

- 15" TFT screen displays the ventilation parameters, alarm information, and oscillograms, make every operation more easily
- Multiple ventilation mode can meet different clinical requirements.(IPPV A/C PCV SIMV PSV SPONT/CPAP SIGH MANUAL
- 3 oscillograms for your choice, 2 of them can be displayed on the screen at the same time
- Humidifier can heat and wet breathing gas, makes it comfortable for patient to breathe
- Rapid oxygen supply, automatically offer high flow rate oxygen within two minutes
- High temperature resistance breathing circuit is reusable and anti-pollution

## Safety

- 14 types of sound and visual alarm information, easier for users to do some error checking and troubleshooting
- Built-in oxygen concentration sensor, ensure stable precision of oxygen concentration
- Easy to move with four casters, easy to stop with two brakes
- Separate design of electronic circuit and gas flow rate keep safe running of ventilator
- Compact long life internal battery can provide emergency power, avoid risk of patient
- Self-check before operation, eliminate system mistake



# Packing list

Name: Ventilator      Type: S1100

NO.	Name	Specification	Quantity	Unit	Remark
1.	Main body	2.782.075A	1	PC.	Packing box 1
2.	Power cord	1.2M	1	PC.	
3.	Air compressor	2.782.134A	1	PC.	Packing box 1
4.	High pressure hose for air compressor	4.472.023	1	PC.	
5.	High pressure O <sub>2</sub> hose	4.472.001	1	PC.	
6.	CO <sub>2</sub> sensor	KM7012	1	PC.	
7.	Power cord	4M	1	PC.	
8.	Fuse	T2A	4	PCS.	
9.	Fuse	T4A	2	PCS.	
10.	Fuse	T10A	2	PCS.	
11.	Fuse	T6.3A	2	PCS.	
12.	Screw	M5X16	6	PCS.	
13.	Serrated saddle	Φ 5	6	PCS.	
14.	Hanger		1	PC.	
15.	Humidifier (adult)	SH330	1	PC.	
16.	Breathing tube (C- I -1)	(Φ 22- Φ 22) × 800mm	2	PCS.	Packing box 2
17.	Breathing tube(C- I -1)	(Φ 22- Φ 22) × 400mm	3	PCS.	
18.	Breathing tube(C- I -2)	(Φ 22- Φ 22) × 400mm	3	PCS.	
19.	Breathing tube(C- I -2)	(Φ 22- Φ 15) × 800mm	2	PCS.	
20.	Water trap	Adult	2	PCS.	
21.	Y connector	Adult	1	PC.	
22.	Y connector	Child	1	PC.	
23.	L connector		2	PCS.	
24.	Test lung	1L	1	PC.	
25.	Operation manual		1	PC.	
26.	Certificate of Quality		1	PC.	
27.	Packing list		1	PC.	

# Main technical specification of S1100

## Power supply

● Voltage	100-240 V ~
● Frequency	50 Hz/60 Hz
● Input power	80 VA
● Internal power	DC12V 4Ah
● Fuse	
—Main power	T2AH 250V
—Internal power	T4AH 250V

## Ventilation mode

- IPPV
- A/C
- V-SIMV
- P-SIMV
- PSV
- PCV
- SPONT/CPAP
- PRVC
- APRV
- DuoLevel
- SIGH
- MANUAL

## Ventilation parameter adjustment

● Frequency	
—Adjusting range	1 /min ~ 100 /min (Under SIMV: 1 /min ~ 40 /min All mode except SIMV: VT <sub>H</sub> 4 /min ~ 40 /min VT <sub>L</sub> 20/min ~ 100 /min )
—Allowable error	±1 /min or ± (10% setting value), whichever is the greater
● Inhalation time ( I:E ) ( Tinsp )	
—Adjusting range	0s ~ 12s(except SIMV mode, I:E 4:1 ~ 1:8)
—Allowable error	± 15 %
● Tidal volume ( VT )	
—Adjusting range	0 mL ~ 1500 mL And: VT <sub>H</sub> 250 mL ~ 1500 mL VT <sub>L</sub> 0. 20 mL ~ 300 mL

—Allowable error	$\pm (10 \text{ mL} + 10\% \text{ setting value})$
● Minute ventilation ( MV )	
—Max MV	
$VT_H$	$> 18 \text{ L/min}$
$VT_L$	$> 10 \text{ L/min}$
● PEEP	
—Adjusting range	$0 \text{ cmH}_2\text{O} \sim 20 \text{ cmH}_2\text{O}$
—Allowable error	$\pm (2 \text{ cmH}_2\text{O} + 5\% \text{ setting value})$
● CPAP	
—Adjusting range	$0 \text{ cmH}_2\text{O} \sim 20 \text{ cmH}_2\text{O}$
—Allowable error	$\pm (2 \text{ cmH}_2\text{O} + 5\% \text{ setting value})$
● Continuous flow	
—Adjusting range	$VT_H \quad 7 \text{ L/min} \sim 60 \text{ L/min}$ $VT_L \quad 2 \text{ L/min} \sim 30 \text{ L/min}$
—Allowable error	$> 3\text{L/min}, \pm 15\%$ $< 3\text{L/min}, \pm 0.5 \text{ L/min}$
● Inspiratory trigger	
Pressure trigger ( PTr )	$-20 \text{ cmH}_2\text{O} \sim 0 \text{ cmH}_2\text{O} \text{ (Under PEEP)}$ $\pm (1 \text{ cmH}_2\text{O} + 10\% \text{ setting value})$
Flow trigger	
—Adjusting range	$0.5\text{L/min} \sim 30 \text{ L/min}$
—Allowable error	$> 3\text{L/min}, \pm 15\%$ $< 3\text{L/min}, \pm 0.5 \text{ L/min}$
● Pressure control ( Pc )	
—Adjusting range	$5 \text{ cmH}_2\text{O} \sim 60 \text{ cmH}_2\text{O}$
—Allowable error	$\pm (2 \text{ cmH}_2\text{O} + 5\% \text{ setting value})$
● Pressure support ( Ps )	
—Adjusting range	$0 \text{ cmH}_2\text{O} \sim 60 \text{ cmH}_2\text{O}$
—Allowable error	$\pm (2 \text{ cmH}_2\text{O} + 5\% \text{ setting value})$
● O <sub>2</sub> concentration	
—Adjusting range	$21 \% \sim 100 \%$
—Allowable error	$\pm 3 \% \text{ (v/v)} \text{ or } \pm 10 \% \text{ setting value, whichever is the greater}$
—Response time of the VENTILATOR from a volume fraction of 21 % to 90 %	
	Vt 500 mL    2s
	Vt 150 mL    2.5 s
	Vt 30 mL    3s
● Holding time ( Inhalation platform ) ( TIP )	
—Adjusting range	$0 \sim 6\text{s}(0 \% \sim 50\% \text{ inhalation time})$

ftJlawable error  $\pm 0.1\text{s}$  or  $\pm (10\% \text{ sett}\ddot{\text{e}} \text{ value})$ , which ever is the greater

- Apnea & ntilatioo  
-Adjustingrange OFF. 5s - 60s
- Maximal InspiratoryFlow Rate  
MaximalInspiratoryFlow Rate: > 60 Umin
- Max setworking pressure ( pressure limit range ) 20cmHP - 100cmH<sub>O</sub>
- Max pressure < 125cmH<sub>O</sub>
- OutputMV under manualventilation > 2SL加 in
- Nebulizergas maximumoutput pressure<0.2 MPa  
maximumoutput flow> 8 Umin

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explanation:

- 1 ) set p $\ddot{\text{e}}$  sure limitvalue to prod $\ddot{\text{e}}$  maximum working pressure(the upper limittd high airway pressure alann)
  - 2 ) do not use heart pressure at exhalation
  - 3 ) maxim $\ddot{\text{e}}$  Hmit pressure is pressured by safetyvalve.
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## Ventilation parameter Monitoring range

- The follow $\ddot{\text{e}}$  g are mon ori闻 parameters under t恼 environment of body temperature and pressu心 saturated
- Fig display:

Parameter	氏, nge	Resolving power	压 uracy
F 频 uency( Freq)	0/mln - 100/min	1/min	$\pm 1/\text{min}$ or $\pm (10\% \text{ actual frequency})$ , whichever is greater
Tidalvolume(VT)	0 mL- 2000mL	10ml	$> 50\text{mL}$ , $\pm (4.0\text{ mL} + 1.5\% \text{ actual trend})$ ( 50 ml , 必 mL )
M(iMnutV)e ventilation	0Umin-99Umin	0.1 Umin	$> 3\text{Umin}$ . $\pm (15\% \text{ actual ventilation})$ (3Umin, 心 SUmin)
(Ppeak	0cmH <sub>O</sub> -100cmH <sub>O</sub>	1cmH <sub>O</sub>	$\pm (2\%\text{full scale} + 4\%\text{actual 沸或i叨})$
Qconocentration	15% - 100%	0.1 %	$\pm [2.5\% (\text{v/v}) + 2.5\% (\text{O}_2 \text{ entrainment level})]$
Compliance	1~100OmUcmH <sub>O</sub>	1mL/cmH <sub>O</sub>	

- Waveform display:
  - Time-airway pressure (under all modes)
  - Time-flow (under all modes)
  - pressure volume loop (all modes)

Remarks: The machine cannot record all the adjusting and monitoring values.

- the purpose, sensor position, type and sampling method of control, measurement and display device

the purpose	sensor position	type	sampling method
Airway pressure	Exhaling end	pressure-voltage, Simulated data	Choose average value from multiple sampling
PEEP	Exhaling end	pressure-voltage, Simulated data	Choose average value from multiple sampling
Continuous pressure	Exhaling end	pressure-voltage, Simulated data	Choose average value from multiple sampling
freq	built-in	time, simulated data	Choose average value from multiple sampling
Inhalation time	built-in	time, simulated data	Choose average value from multiple sampling
Holding time	built-in	time, simulated data	Choose average value from multiple sampling
tidal volume	Exhaling end	flow-voltage, Simulated data	Choose average value from multiple sampling
flow	Exhaling end, inhaling end	flow-voltage, simulated data	Choose average value from multiple sampling
O <sub>2</sub> concentration	Inhaling end	O <sub>2</sub> concentration-voltage, simulated data	Choose average value from multiple sampling



# 医疗器械 产、 可证

许可证编号：苏食药监械生产许20070089号

企业名称：

法定代表人： 楼[J]甜 : 产品抒记表

企业负责人： 彭家良

住 所： 南京市江<sub>北</sub>新区冈富路9号6号 发证部门： 江 苏

有效期限：至 2022 年 1 月 8 日 发证日期： 2017 0 9 日

生 许



南京舒普思达医疗设备有限公司

生产地址：南京市江北  
层、三层

该复印件与原件一致  
仅供存档备案，不做经营凭证

再复印无效

生产范围：见医疗器械  
公司名称

省药



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从 kred 心 ru 心 如 比  
D-ZM-11321-01-00



Product Servi<sup>ts</sup>

# Certificate

No. 05 082515 0006 Rev. 00

Holder of Certificate:

Uuhe District

Facility(ies):

NanJing Superstar Medical Equipment Co.. Ltd  
The 2nd and 3rd Floors, No6 Building, No.9 Bofu Road, Yan11ang  
industri al Development Zone . Liuhe District. 211505 Nan jing,  
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Scope of Certificate:

Design and Development,  
Production and Distribution of  
Anaesthesia Systems, Ventil ators ,  
CPAP Systems, N20 Sedation Systems ,  
Air Compressors and Oxygen Concentrators ,  
Sleep Therapy Systems

Applied Standard(s):

EN ISO 13485:2016  
Medical devices - Qualit't management systems -  
Requirements for regulatory pu rpo ses  
{ISO 13485:2016)  
DIN EN ISO 13485:2016

The Certification Body of TOV SOD Product Service GmbH certifies that the company mentioned above has established and is maintaining a quality managementsystem, which meets the requirements of the listed standard(s). See also notes overleaf

Report No.: SH1873607

Valid from: 2019-03-01

Valid until: 2022-02-28

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Stefan Preil?.

Date, 2019-02-27

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